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ABSTRACT

This paper examines the language dominance and oral bilingual proficiency of Tarahumara-Spanish speaking students from Chihuahua, Mexico, within the framework of Cummins' model of bilingual proficiency development. Cummins' model distinguishes between basic interpersonal communicative skills (BICS) and cognitive academic language proficiency (CALP). The children in this study lived in a Tarahumara village and attended a weekday boarding school in which Spanish was the language of instruction and Tarahumara was used as a support in the classroom. Bilingual interviews were conducted with 66 children in grades 1-6 using the Entrevista Bilingue, in which picture stories elicited bilingual dialogue and served as the basis for free narration tasks. Data analysis showed that 29 percent of the children were bilingual, Tarahumara-dominant, and 64 percent were balanced bilinguals who showed comparable, advanced or native-like levels of conversational proficiency and minimally acceptable text production in both languages. The results indicate that exposure to Spanish-only instruction did not result in attrition of Tarahumara conversational proficiency. Findings also indicate that the constructs of BICS, CALP, and language interdependence in the oral domain are applicable to a context of diglossia, and that the Entrevista Bilingue can be a useful tool for teachers. (Contains 20 references.) (SV)

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Measuring Language Dominance and Bilingual Proficiency Development of Tarahumara Children

Carla Paciotto

This paper presents an analysis of language dominance and oral bilingual proficiency of Tarahumara-Spanish speaking children from Northern Mexico within the framework of Cummins' model of bilingual proficiency development. The children were assessed through a bilingual interview, which allowed for the testing of language dominance along with the constructs of BICS and CALP and language interdependence in the oral domain. Preliminary findings indicate that these constructs are applicable to a context where the two languages are in a relation of diglossia. In this case where the children enter school as bilingual speakers dominant in Tarahumara and the native language is not used as a medium of instruction.

Bilingual educational programs for minority language students are still contentious in most multilingual regions of the world. In general, proficiency in the dominant language has been considered by program developers and teachers to be the solution to the obstacles that a high number of language minority children encounter in school. In order to reach this goal, monolingual programs in the second/dominant language and transitional bilingual programs are commonly perceived as more effective than additive programs that foster the development of first and second language literacy. This perception is based on the rationale that, since school success is a function of proficiency in the dominant language, it is "common sense" to provide maximum exposure to the second/dominant language as quickly as possible.

These beliefs and corresponding instructional practices persist in spite of the conspicuous evidence of the learning advantages that additive bilingual and biliteracy education programs present for language minority children over monolingual and transitional bilingual practices. Among the second language learning models that illustrate such advantages, Cummins' (1979, 1996, Cummins & Swain, 1986) psycholinguistically oriented theoretical model of bilingual proficiency has gained wide support over the last 20 years. In spite of the critiques of Cummins' model, which are beyond the scope of this article (Edelsky, 1996; Edelsky et al., 1983; Martin-Jones & Romaine, 1986), this has been considered as offering a strong explanation of how the development of academic language skills (higher-order cognitive knowledge) in the first language (L1) facilitates and strengthens the development of academic skills in the second language (L2) through a process of cognitive transfer.

Over the years, Cummins' model has been refined and tested through studies carried out primarily within the contexts of language minority education for immigrant students in the U.S.A., Canada, Europe, and Australia. The research

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of interest here relates to the examination of Cummins' model in the analysis of bilingual proficiency of students who are native speakers of an indigenous language. Specifically, the present investigation follows a recent research direction in this area (Francis, 1997, 1999, 2000) that focuses on how Cummins' framework can help to describe bilingual proficiency development within a diglossic language contact situation, where an indigenous language holds a subordinate prestige-value, a restricted functional domain, and is not used as a medium of instruction. First, a brief description of Cummins' model for the study of bilingual proficiency is provided as the theoretical framework of relevance.

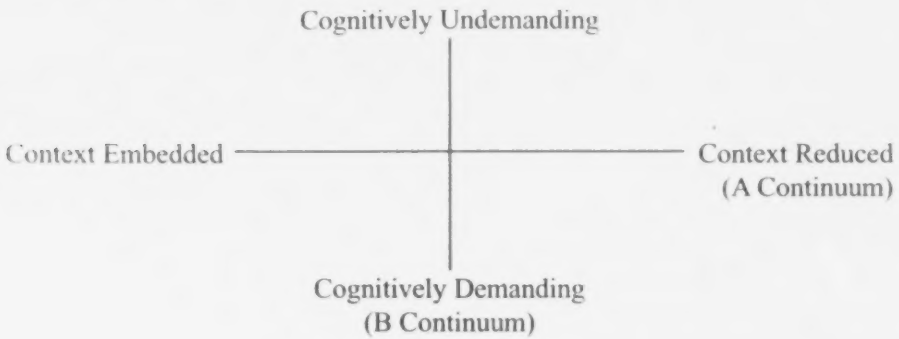
Cummins' framework

Among the most important theoretical constructs proposed by Cummins since his early work (1979) is the distinction he made between the development of conversational language (also termed basic interpersonal communicative skills or BICS) and academic language proficiency (also termed cognitive academic language proficiency or CALP). This construct postulates that every first language learner develops a language proficiency for face-to-face daily conversation, which Cummins calls conversational language and also defines as "surface level fluency" or "basic fluency" in the native language. L1 conversational proficiency is usually reached around six years of age. Children who enter school taught in a L2 take from two to three years to develop a peer-appropriate conversational fluency in the L2 (Cummins, 1997; Collier, 1995).

Conversational language represents a distinct—but not unrelated—level of language development from academic language proficiency, which is developed with school experience and continues throughout life. In the context of schooling for minority language students, CALP development in a second language usually follows BICS development and takes from five to seven years.

It is important to emphasize that the distinction between conversational and academic language does not refer to two opposing dimensions of language acquisition, but rather to language tasks and activities that are characterized by different degrees of (1) cognitive effort/involvement and (2) contextual information and clues needed to process those tasks. These two dimensions are conceived as two intersecting continua: (A) context-embedded vs. context-reduced and (B) cognitively undemanding vs. cognitively demanding communicative events (see Figure 1). At one extreme of the (A) continuum, we find communicative events typical of everyday face-to face conversation where "the participants can actively negotiate meaning ... and the language is supported by a wide range of meaningful paralinguistic and situational clues" (Cummins, 1986, p. 154). This type of activity is also cognitively-undemanding since the "active cognitive involvement" (Cummins, 1997, p. 58) is low when processing language. On the other end of the continuum, we find context-reduced communication, which "depends heavily on knowledge of the language itself" (Cummins & Swain, 1983, p. 36) and is characteristic of school-related tasks. An example of such activity is essay writing, where meaning is not produced by any cue external to the text. In this case, the task requires a high level of cognitive involvement; therefore it is placed at the extreme of the (B) continuum.

Figure 1. Range of contextual support and degree of cognitive involvement in communicative activities



Authors from different perspectives (Biber, 1986; Feldman, 1991; Tannen, 1985) have demonstrated how oral and written texts are not oppositional forms. Depending on the contexts and purpose of the speech event, both the oral and written texts can rely on conversational or formalized language. The important point of these studies for the educational context is that oral language, especially oral language used and developed in school settings, contributes to the acquisition of high cognitive skills in a similar fashion as literacy. That spoken discourse can possess similar characteristics as written discourse is demonstrated both by studies of children's language developed in school settings (Tannen, 1985) and studies of oral genres present in oral/traditional societies (Feldman, 1991). Both studies illustrate that oral discourse can be based on highly formalized and self-contextualizing structures that possess the qualities of academic discourse.

In any case, the failure to recognize the distinction and relationship between conversational/BICS and academic/CALP levels of oral and written development in the case of minority students, according to Cummins (1986), often results in an incorrect use and interpretation of assessment measures of language minority students' academic abilities. Proficiency in conversational skills—developed through conversation with peers—is often expected to predict proficiency in academic discourse—developed through academic tasks. When this expectation is in place, and second language learners possessing peer-appropriate proficiency in conversational language score at low levels on school standardized (cognitively-demanding) tests, the low scores are interpreted as indicating learning disabilities instead of a student's lack of academic language proficiency. This misinterpretation causes minority students to be inappropriately placed in special education classes.

The construct of CALP proficiency also becomes critical when combined with the evidence that academic discourse in both L1 and L2 is built on the same cognitive knowledge and structures (common underlying proficiency or CUP). Once these are acquired in one language, they are shared by and transferable to

other language systems (the principle of language interdependence). In this perspective, the development of higher order/school-related cognitive structures in L1 does not present an obstacle to the development of L2 skills, but, on the contrary, creates a strong base for L2 development. Developing higher order academic discourse in the stronger/more proficient language (L1) can take place earlier in the schooling process and, most importantly, at grade level. In this way, academic skills can be readily transferred to L2 after surface fluency in the second language is acquired, instead of directly developing them in L2 at a much slower pace, which risks that a learner will not catch up with mainstream class level.

This transferability of skills from L1 to L2 implies that for language minority students who are exited from transitional bilingual programs after three years and are provided no support in L1, through which they could perform grade-level tasks, the transfer and general developments of cognitive knowledge are interrupted or slowed down (Collier, 1995; Cummins, 1997). The tendency for such students is to fall behind and fail academically, since at this stage they have not developed enough L2 proficiency to perform at grade level. Second language instruction with no bilingual component can yield the same results. Typically, the first years are focused on grammatical competence, and second language learners fall behind in the development of grade-level academic language. The case of submersion programs in the dominant language is also common, and the most relevant for the present discussion. Education for many indigenous populations in Mexico follows this pattern, where no L1 instruction and no second language instruction is offered even where the school is attended by a majority of indigenous language speakers and the teachers are bilingual.

The Tlaxcala study

Francis' (1997) study of Nahuatl-Spanish speaking students in the state of Tlaxcala, Central Mexico, examined precisely the development of bilingual proficiency in a school where the native indigenous language was not employed as a medium of instruction. The examination of the development of bilingual proficiency when the native language is not used in instructional context "represents a different vantage point from which to conceptualized the models of linguistic interdependence, common underlying proficiency, and transfer" (Francis, 2000, p. 170) proposed by Cummins' model.

The purpose of the Nahuatl study was to analyze "the degree to which comprehension skills and discourse competencies learned in school through the medium of Spanish, would be available to the students when presented with similar tasks in Nahuatl" (Francis, 1999, p. 534). The study tested the distinction between BICS and CALP and the principle of academic language interdependence by comparing levels of higher order discourse through oral, written, and reading tasks in the two languages, where levels of oral bilingualism were correlated with reading and writing abilities. Through this series of tests, the study showed evidence of a parallel development in L1 and L2 of higher order discourse structures across the three modalities. Even though the mother tongue

was not employed for academic purposes in the school, its CALP development trend across the oral and literacy dimension was comparable to that found in Spanish. This result suggested a relationship of interdependence of the higher order cognitive processes underlying the oral, written, and reading tasks in both languages and the general applicability of the construct of CUP even in unbalanced diglossic relationships (Francis, 1999, p. 534) where the indigenous native language is not employed for academic tasks in class. The Tlaxcala study presents an additional case suggesting that native literacy could be developed without impinging on the development of L2 orality and literacy; on the contrary, it could potentially strengthen L2 academic proficiency owing to the transferability of academic skills from one language to the other.

Following the Nahuatl-Spanish case study's framework, the Entrevista Bilingüe (Bilingual Interview) was employed to provide a measurement of language dominance and bilingual proficiency development of Tarahumara students by looking particularly at oral conversational and academic language. Specifically, the replication of this part of the Tlaxcala study in a Tarahumara contexts addressed the following questions: (1) What is the language proficiency and dominance profile of Tarahumara children entering the primary school and how does it change across grades? (2) How accessible to L1 are higher-order oral discourse skills, when L1 is not used in class for academic discourse and tasks? (3) What do the answers to these questions say about the possibility of creating a language maintenance program that benefits both L1 and L2 development of academic discourse?

Context of the study

The Bilingual-Bicultural Program: Tarahumara is a Uto-Aztecan language spoken by one of the largest indigenous group of the Southwestern area inhabiting the Sierra Madre Occidental of Chihuahua, Northern Mexico. Even though in some areas of the Sierra range Tarahumara is reported to be still strong and the primary language of many communities, at the same time, it appears to be undergoing a fast shift in areas of intense and increasing contact with the Spanish-speaking populations. Seasonal migration to mestizo towns and cities to find work also seems to bring about a rapid shift to Spanish by younger generations.

Since 1993, the State of Chihuahua—reflecting the federal education policy for indigenous populations—has mandated a bilingual-bicultural education program (BBEP) for the schools attended by a majority of Tarahumara children. In light of the failure of Spanish-only education to produce successful learners among the Tarahumara, the program was created as an attempt to reduce the gap between home and school culture and language and foster a more favorable learning environment by strengthening the sense of cultural and linguistic identity of the students. In this perspective, the BBPE theoretically conceives of literacy in the native language as beneficial for the development of L2 literacy and for academic success in general, and at the same time it considers the written word as possessing a reinforcing power for the native language and speakers' sense of identity.

The BBEP was designed as a transitional program where children would be taught literacy in their native language and in Spanish up to third grade, after which Spanish would increasingly become the main medium of instruction. For this purpose, the state developed a standard written form of Tarahumara used in a complete series of bilingual textbooks freely distributed to the primary schools and offered a series of summer teacher training sessions to enable the implementation of the BBEP. However, interviews with the teachers working in the uplands of the Sierra showed that bridging home and school environment and maintenance of the native language are not strong enough motives to introduce Tarahumara literacy in the classroom.

The data presented here are part of an ethnographic study of the BBEP for the Tarahumara of the Sierra Madre, Northern Mexico, carried out in a community where the Tarahumara language presents a diglossic distribution in relation to the dominant language (Spanish). Tarahumara is the low-prestige language and is confined to the community and family oral communicative space, while the written and larger social domains are "occupied" by Spanish. Part of the study was devoted to delineating the sociolinguistic and language dominance profile of Tarahumara students across the six grades and to contextualizing the work and instructional choices of the teachers and the perceived (in)feasibility of the BBEP. At the same time, the study sought to assess the indigenous children's oral and written proficiency in the two languages in a developmental perspective by replicating the study of bilingual proficiency conducted in Tlaxcala (Francis, 1997). The Tarahumara study can provide further data on the acquisition of bilingual proficiency and its potential benefits in an indigenous language context, which bears similarities with the sociolinguistic and instructional settings of the Tlaxcala study.

The Community: The study was carried out in the primary school located in Mawichi (a pseudonym), one of the most accessible all-Tarahumara villages in the uplands of the Sierra Madre Occidental in the State of Chihuahua. Located at 7,000 feet in a small valley surrounded by canyon walls, Mawichi has recently become more accessible by car from Creel, a well-known tourist destination. The nearness to Creel, the presence of a renowned mission built by the Jesuits in 1740, and the recent opening of a high-quality handicraft shop have made Mawichi one of the top stops for tourists. Almost every day at least one bus or car loaded with foreigners and Mexican tourists arrives in the village.

The village is the center of Sunday gatherings of the broader community for religious and land-related reunions, together with sport competitions and commercial transactions. The village is also where the health clinic, the largest boarding school of the *ejido* (land unit), and the civic registrar are located. However, the village is not where the majority of the Tarahumara families belonging to the *ejido* of Mawichi live. Apart from a limited number of families living around the church and school area, the rest of the Tarahumara—a total of 1,247 people—live in three to four house-clusters overlooking their cornfields. These cornfields provide them with their annual ration of corn and are scattered around the valleys and canyons of the *ejido* (30,700 hectares).

This form of settlement and geographic isolation required by the Tarahumara corn-based subsistence economy has pushed the department of education since the 1970s to create a system of boarding schools for primary education throughout the Sierra, which can be reached by children in a maximum of one or two hours of walking. The location of the boarding schools within the community boundaries and the 5-day-a-week attendance arrangement allow children to return to their families during the weekends. The boarding school system represents a successful alternative to mainstream day and religious year-around boarding schools (*internados*), which are usually far removed from the native communities.

The boarding school in Mawichi has reached a higher enrollment only in the last 10 years owing to the increased need of the Tarahumara to work outside of the native community, for which they require at least basic literacy and oral proficiency in Spanish. However, dropout rates are very high, mainly because of the need of young people to support themselves and their family. According to local census data, the level of attendance has increased in the younger generations, but it still remains low.

Teacher and parent interviews suggest that the introduction of bilingual teachers in the boarding school has favored a better communication between school and community and a more favorable instructional environment for the children, who typically are incipient learners of Spanish upon entering first grade. In light of this perspective, bilingual education is understood by teachers and parents as using Tarahumara as an "*apoyo*" (support) in the classroom for the translation of Spanish content, instructional directions, discipline purposes, and informal talk.

Teachers agree that the native language is generally in danger of shifting and that literacy could strengthen the language and the sense of identity among children. However, they do not consider maintenance of the native language to be a priority, considering that children are rarely exposed to Spanish before school and that Spanish is required to deal successfully with the dominant society. Similarly, the majority of Tarahumara parents do not see the disappearance of their native language as a possibility, considering the strength of the language in the homes, and therefore they do not see the need for a maintenance program in the school. At the same time, teachers and parents often think of the children's first language as an hindrance to the acquisition of Spanish. Even though many teachers in these days are attending teacher education programs that emphasize the importance of valuing the Tarahumara language and culture in class, these training courses appear to overlook the usefulness of literacy development in L1 for general academic success.

Therefore, the indigenous language still remains an oral language for the great majority of the Tarahumara, in spite of the fact that there is an increasing number of materials written in both standardized and vernacular forms of the language. However, the presence of the bilingual books in the school is very important for the conceiving of Tarahumara as a written language by Tarahumara speakers. Even though they were not used in class for formal instruction, chil-

dren had access to them and sporadically read them spontaneously outside of instructional time. In addition, almost all the (literate) parents interviewed knew about the books and had an opinion about the standardized form of Tarahumara used in the book. There seemed to be no aversion to the concept of writing in Tarahumara, only a rejection of the standardized form and a general indecision about how the written language could serve them.

The School: The primary school under study had 147 children enrolled, with the majority of students in two 1st grade classrooms and two 2nd grade classrooms. Among the entire student population, 22 were monolingual speakers of Spanish, two of whom had passive knowledge of Tarahumara and 11 of whom were the children of the teachers and staff members. The other 11 lived very close to the school in the village of Mawichi, and typically one or both of their parents did not speak Tarahumara. These students were distributed across the six grades.

According to the teacher and student interviews, the rest of the students were native speakers of the indigenous language and second language learners of Spanish, which they mainly learned in school. However, Tarahumara for the native speakers generally remained the language of informal student-to-student interaction in and out of the classroom and across grades.

The primary school was served by six teachers. Three teachers were fluent speakers of Tarahumara, one had a passive knowledge of the language, and two were monolingual Spanish speakers. For the most part, the teachers came originally from other Tarahumara communities but now lived in or very close to Creel, the major mestizo town in the area and the headquarters of the school district. During the week, teachers usually lived at the school with their families, returning to Creel on the weekends.

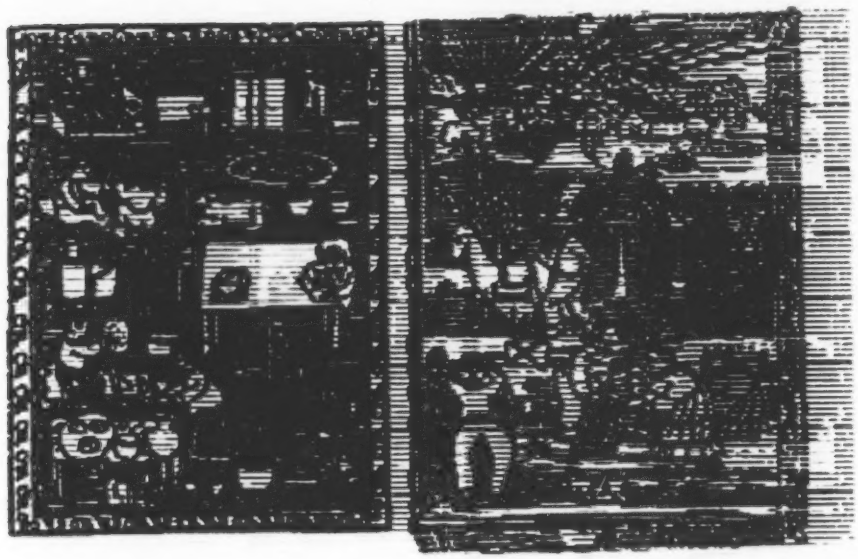
The study

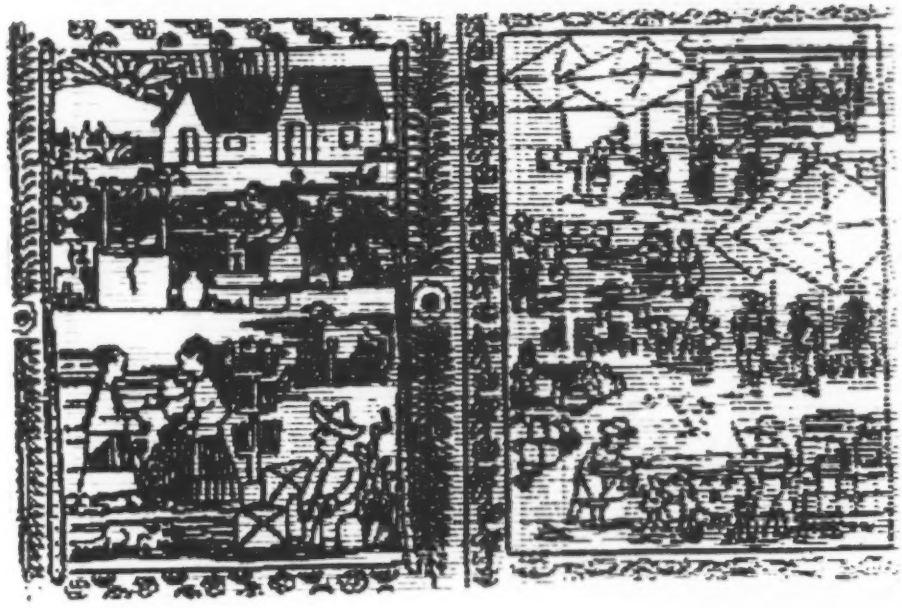
Method–The Entrevista Bilingüe: The Bilingual Interview was administered to systematically measure language dominance and to detect trends in the development of oral bilingualism throughout the schooling process. The interview was designed to elicit language data from two sets of plates illustrating familiar situations (see Figure 2) and two illustrated stories of five pictures each that depicted familiar daily life situations in rural contexts (see Figure 3). The illustrations took into account cultural and environmental references for Nahuatl speakers located in Central Mexico and were judged by the school teacher to be appropriate for the Tarahumara children's cultural context.

The bilingual interview was divided into three sections:

1. A vocabulary section, which elicited two lists of words per language based on the two plates per language;
2. A conversation/dialogue (question and answer) section based on two five-picture stories;

Figure 2. Plates employed for the bilingual vocabulary task (illustrations by Antonieta Castilla from Francis, 1992)





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3. An oral narration section, based on the same picture stories, which tested the students' ability to produce a complete text independently. This section was analyzed according to the following criteria:
   (a) minimal acceptability of individual sentences judged by a native speaker to be native-like and connected to the pictures; and
   (b) textual complexity of narration judged by the number of connectors (e.g., therefore, then, later, because) and inferences.

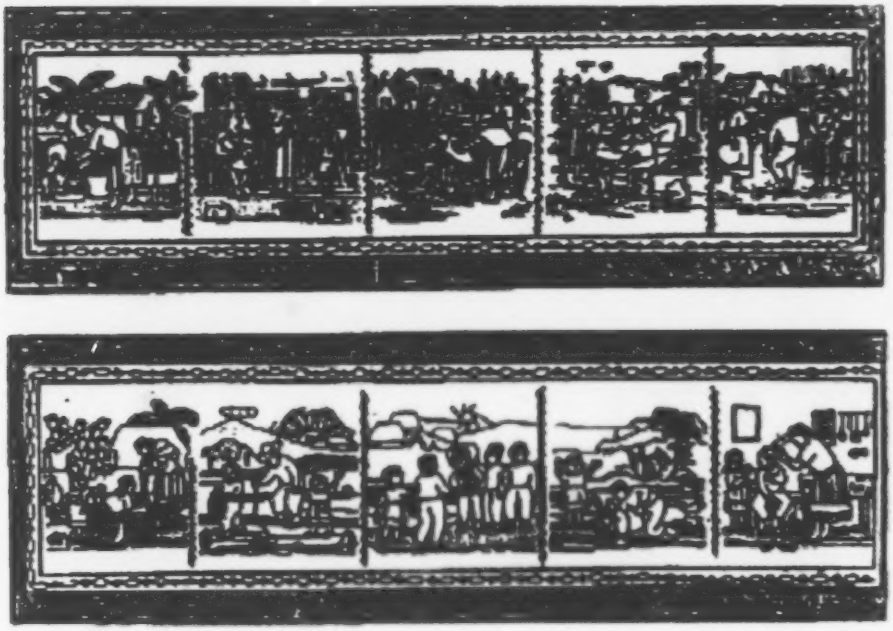
Section 1, 2, and 3a, were respectively considered as providing a measure of conversational proficiency, testing the ability to produce everyday vocabulary, understand and answer intelligibly simple questions, and produce grammatically acceptable texts. On the other hand, 3b was considered as providing a simple measure of discourse competence, as signaled in the texts by (1) the ability of the students to make inferences, where inferences "form an important part of the higher levels of literacy" (Olson, 1991, p. 263) and (2) students' use of connectors to build coherent texts, where coherence is defined as "the ability to arrange ideas in logical sequence and organize meanings effectively" (Cummins, 1986, p. 113).

Limitations of the Instrument: The fact that the instrument does not look for specific language-bound grammatical features allows for its use in testing bilingual speakers of any language. Its manageability and easiness of administration and scoring allow teachers to carry it out without any specialized knowledge of linguistics and without the need for extensive training. However, because it does not look for specific items, the interview cannot clearly identify distinctions between intermediate, advanced, or native-like speakers proficiency, rather it provides a general estimation of language dominance.

Administration of the Bilingual Interview: The administration of the interview was carried out by two different interviewers—myself and a bilingual teacher, who was a native speaker of the Tarahumara variant spoken by the children under study. The designated teacher-assistant taught kindergarten and had been teaching at the same school for five years, and almost all the children were familiar with her and recognized that she was a fluent speaker of Tarahumara. In my case, I waited for a few months before administering the interview, giving the children a chance to become accustomed to my presence. By the time I started interviewing, I had substituted as a teacher for all of the classes, interacted with every grade in the various classrooms, participated in school activities, and played with children during morning and afternoon recess for three months.

During the administration of the interview, the majority of the children seemed to enjoy the one-on-one attention and the picture-description tasks. Only one first grader refused to speak during the interview and had to be excluded from the sample. However, some children were shy and did not always appear to be comfortable with the one-on-one interaction with adults and often needed repeated prompting to respond. The teacher-assistant who administered the Tarahumara part of the interview also encountered a similar situation. She

Figure 3. Picture stories employed for the bilingual dialogue and free narration tasks (illustrations by Antonieta Castilla from Francis, 1992)



noticed that some children were "slow in answering" and that with some children she had to repeat the questions a few times. Her observations indicated that the data was collected under similar constraints and could be compared, despite the use of two interviewers.

The teacher also felt that the production of the free narration was somewhat "stiff." Comparing her class experience, she said that children in her kindergarten class usually speak longer and "invent" a lot more. On one level, she confirmed the fact that children in the lowest grades and in kindergarten are familiar with picture description and story telling; on another level, she indicated that the interview process might elicit somewhat contrived responses.

Sampling: In the Tlaxcala study the subjects were selected from three grades: second, fourth, and sixth. The bilingual interview was only one part of a large battery of tests, whose general objective was to examine the students' reading and writing abilities in light of the children's oral proficiency across grades. The school had 400 enrolled children; the bilingual students were sampled by asking teachers to make a list of students belonging to high, medium, and low reading and writing skills in order to be representative.

In the case of the present phase of the study, all the grades were included in the sample, since oral bilingual data across the grades was deemed crucial to the understanding of the relationship between teacher language use in the class and the children's language skills. Especially in the case of first graders, their lan-

guage proficiency and dominance profiles were important in order to understand the quality of their experience during the first phases of literacy training. All the Tarahumara children enrolled were rarely in school at the same time and on average only 90 attended regularly. Because the 3rd, 5th and 6th graders were very few, all of them were included in the sample. First and second graders were chosen randomly.

Monolingual Spanish speakers, who represented a minority population in every class, were excluded from the sample. Their monolingualism was determined by the teachers and confirmed by observational data. Also, four students whose first language was Spanish and were said to be beginning learners of Tarahumara as a second language in school were excluded from the analysis. Both these groups were considered nonrepresentative of the majority Tarahumara-speaking student group.

In total, the sample of children interviewed was 66 children from the first through the sixth grade.

1st grade	=	13	(5 girls, 8 boys)
2nd grade	=	16	(10 girls, 6 boys)
3rd grade	=	9	(2 girls, 7 boys)
4th grade	=	15	(7 girls, 8 boys)
5th grade	=	7	(2 girls, 5 boys)
6th grade	=	6	(2 girls, 4 boys)

Results

All the children interviewed, with the exception of one, produced a complete language sample in at least one language and showed sensitivity to the separation of codes.

For the statistical analysis of the data, the six grades were clustered in three groups, where the first and second (Group I), third and fourth (Group II), and fifth and sixth (Group III) grades were paired in order to have larger sample sizes. This combination also reflected the fact that in reality the 3rd and 4th and the 5th and 6th grades were attending two-grade classrooms.

Language dominance: In order to establish students' language dominance, the scores from both the conversation section and minimal acceptability of oral narration in the two languages were combined. The inclusion of everyday vocabulary in an analysis of language dominance was not considered reliable for languages experiencing a prolonged diglossic relationship.

The question and answer section was scored for a maximum of ten points. Both fragmented and one-word answers were scored as acceptable if intelligible and showing comprehension. The oral independent narration was scored for a maximum of five sentences that were judged by a native speaker as minimally acceptable for a maximum of ten points as well.

The language dominance scale employed here was based on the "Guia del Maestro: Entrevista Bilingüe" (Francis, 1992) (see Appendix for Interview and Scoring Sheet). According to the scale, the language dominance profiles include the following:

-100 to -75 = Spanish Monolingual
-74 to -10 = Bilingual Spanish Dominant
-9 to + 9 = Balanced Bilingual
+10 to + 74 = Bilingual Tarahumara Dominant
+75 to +100 = Tarahumara Monolingual

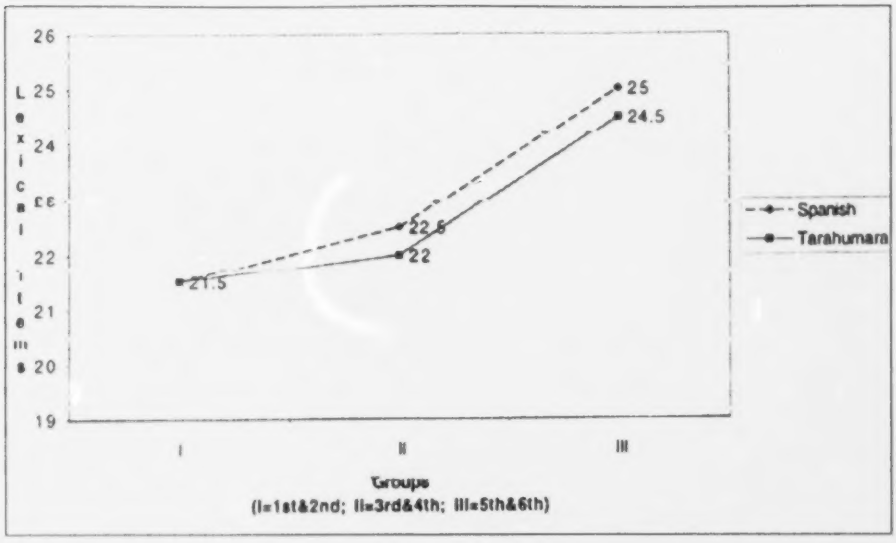
The interview identified three groups in the sample:

1. The first group consisted of four Tarahumara monolinguals, who were found exclusively in the first and second grades. In first grade they made up 23% of the sample. Tarahumara monolingual children showed high proficiency in the face-to-face conversation task and were able to produce a complete minimally acceptable narrative text in Tarahumara. On the other hand, they produced no narration and showed minimal conversational skills in Spanish.
2. The second group included a total of 29% of bilingual Tarahumara dominant speakers across the whole sample. They showed limited proficiency in basic Spanish conversation and limited or no production of a minimally acceptable independent text (low intermediate or beginning learners). In the Tarahumara section, they obtained the highest score in the conversation task and were able to produce a complete minimally acceptable text in Tarahumara. The highest concentration of bilinguals dominant in Tarahumara was found in the first three grades (1st grade = 46%; 2nd grade = 43%; 3rd grade = 44%, 4th grade = 13%; 5th and 6th grade = 0). As confirmed by student language history, observation in and out of the classroom, and teacher and parent interviews, these children were native speakers of Tarahumara.
3. The third group was the most numerous (64%) and was constituted by balanced bilinguals who showed comparable advanced or native-like levels of conversational proficiency and minimally acceptable text production in both languages. As expected, the highest concentration of balanced bilinguals was found in the highest grades (1st grade = 31%; 2nd grade = 43%; 3rd grade = 55%; 4th grade = 87%; 5th and 6th grade = 100%). Even in this case, the students' language history interviews, personal interaction in and out of the classroom, and the teacher and parent interviews confirmed that these were all native speakers of Tarahumara and second language learners of Spanish, with the exception five children who spoke Spanish at home.

The interview yielded language samples that revealed children's abilities in both aspects of bilingual proficiency: Conversational language and academic language. In regard to conversational language proficiency the findings were:

1. *Vocabulary*: All the children interviewed produced a list of words in both languages. The scoring was carried out counting all the lexical items in the list. When a Spanish word appeared in the Tarahumara section, it was added to the Spanish list and vice-versa (see Figure 4).
2. *Dialogue/Conversation*: In the Spanish section, children's scores were highly variable across grades. In the first two grades the ability to understand and

Figure 4. Bilingual vocabulary



answer to either conversationalal language was low and increased throughout the higher grades, where all the children scored the maximum. This was confirmed by a one-factor ANOVA, which showed a significant difference between Group I and Group III ($F(2, 57) = 4.65$, $p \leq .01$). This appears to reflect the fact that the majority of the children came to school with low or almost no knowledge of Spanish and were intensively exposed to Spanish for the first time in school. As expected in a school where the medium of instruction is Spanish, proficiency in conversation language increased with the years of attendance. For the Tarahumara section, no variation across grades was found and the great majority of the children scored 10.

3. *Oral Narration–Minimal Acceptability*: In the Spanish section, scores were variable in the first and second grades, while the children scored the maximum in the higher grades. A one-factor ANOVA confirmed that there was a significant difference between Group I and II ($F(2, 63) = 7.84$, $p < .01$), and Group I and III ($F(2, 63) = 6.79$, $p < .01$). Again, exposure to schooling in Spanish seems to account for this variation. For the Tarahumara section, with the exception of one second grader, all the children obtained the highest score.

Correlation between dialogue/conversation measure and minimal acceptability of narrative text is very high ($r = .768$, $p \leq .05$). An increase in comprehension and ability to respond to everyday questions is related to an increase in grammaticality and ability to describe event sequences. This correlation was anticipated since these skills are part of the same basic conversational competence (BICS) that is acquired in the first years of exposure to a second language and is expected to plateau in two or three years.

In regard to academic language proficiency, the findings were that in both languages the narrative structure of the oral discourse/text shows an increase in

complexity and coherence through the use of connectors and inferences across the grades. This increase is confirmed by one-factor ANOVA, which for both languages shows a significant difference between the Group I and Group III (Tarahumara: $F(2, 63) = 12.64$, $p < .01$; Spanish: $F(2, 63) = 11.84$, $p < .01$). In the Spanish task, I also found significant variation between Group II and III ($F(2, 63) = 3.7595$, $p < .01$); while in the Tarahumara task, significant variation is found between Group I and II ($F(2, 63) = 12.6418$, $p < .01$). The increase of connectors and inferences across grades also shows a positive correlation between the narration task in Tarahumara and in Spanish ($r = .4169$, $p \leq .05$).

Discussion

Study of language dominance: The fact that all the children showed the same high scoring patterns in Tarahumara, across the grades on all the tasks measuring language dominance, indicates that exposure to Spanish-only instructional experience did not result in attrition of Tarahumara conversational proficiency. The indigenous language did not undergo a process of displacement in spite of the fact that instruction was exclusively in Spanish and in spite of the conflictive situation with the dominant language. On the contrary, observation and language history interviews showed that some of the native speakers of Spanish coming from the surrounding community had learned Tarahumara as a second language in school.

At this point of the study, it can only be hypothesized that factors both internal and external to the school and instructional environment play a role in the maintenance of the native language across the grades. In fact, children are free to interact in any language in and out of the class, and the interaction in Tarahumara with the bilingual teachers might have a positive impact on children's level of comfort toward using their native language. At the same time, the low number of monolingual Spanish speaking children in the school, the location of the school within the community boundaries, and the fact that children return to their homes every Friday might also favor the high retention of the native language at any grade level. However, an analysis of whether Spanish lexical items are replacing existing Tarahumara vocabulary could yield a more detailed perspective on the level of shift and maintenance of the native language.

Conversational language proficiency/BICS: The vocabulary list task was not considered a completely reliable measure for the determination of the students' conversational language proficiency and language dominance. In a prolonged diglossic situation as found in the Spanish-Tarahumara language contact dynamic, the indigenous language is the low prestige one and is constantly incorporating new Spanish vocabulary that refers to semantic areas introduced by contact with Mexican culture and technology. For example, school-related vocabulary is a recent acquisition of the Tarahumara everyday life and is reflected in the prevalent use of unmodified Spanish lexical items (e.g., "*lapizero*," sharpener; "*pizarrón*," blackboard; "*libro*," book). Other semantic areas, such as common home furniture vocabulary, are sometimes present in the everyday Tarahumara talk in Spanish and in an incorporated version (e.g., "*cama–cami*,"

bed; "*balde–baldi*," bucket; "*plato-pelati*," plate), perhaps reflecting an earlier introduction of those referents in Tarahumara life. The fact that Spanish lexicon in Tarahumara talk was present in the children's Tarahumara word list in first grade and in sixth grade at the same level (18%) also might indicate that there is a body of lexical items part of the Spanish lexical knowledge common to all the Tarahumara speakers, which is independent from their Spanish proficiency.

In the question and answer and minimal acceptability tasks, all the children by the age of six were judged by a native speaker of the language to be able to express themselves adequately with grammatically acceptable responses and to organize a narrative-like sequence at least in one language. This general ability relates to everyday conversation skills (BICS) and indicates that all children have access to the basic grammatical principles of at least one language for context-embedded face-to-face communicative events, even in cases of unbalanced diglossic relationship between the native and dominant language.

These results present further evidence of the fallacy of the concept of "semilingualism" (Skutnabb-Kangas & Toukomaa, 1976), which refers to a supposed subtractive effect of bilingualism for bilingual children coming from low socioeconomic situations. A semilingual is defined as a speaker who cannot develop a "complete" or "sufficient" competence in either language. According to the concept of semilingualism, the speaker is unable to develop full competence in both languages owing to exposure to low-standard input in either languages and is consequently doomed to fail academically. Such concepts have been widely criticized (Eldesky et al., 1983; Eldesky, 1996; Martin-Jones & Romaine, 1986) as pointing to some inherent cognitive deficit resulting from the speakers bilingualism. The point of the critics is that so-called semilinguals are in reality speakers whose language competence relates to language varieties and repertoires that are considered as nonstandard. Therefore, so-called semilinguals are not linguistically and cognitively deficient, but, in truth, competent and fully fluent and functional in specific domains, which are arbitrarily defined linguistically inappropriate because they are regulated by different norms than the standard academic language of the classroom.

The preliminary results presented here seem to add support to this hypothesis that there is no speaker who is inherently deficient and lacks the linguistic basis for developing literacy skills. Even in situations of unbalanced bilingualism where Tarahumara and Spanish are in a diglossic relationship and indigenous children live in depressed socioeconomic environments, they invariably possess the grammatical competence necessary to interact successfully in everyday situations in at least one language. This ability is acquired through "natural" exposure to language interaction since a young age and produces the linguistic/grammatical foundations for the future development of literacy-related skills and academic success.

Finally, the data shows that exposure to Spanish instruction allows Spanish conversational proficiency to increase up to advanced or native-like proficiency levels. Specifically, variation in the basic conversational skills stops after third grade, when the great majority of the students show high levels of conversa-

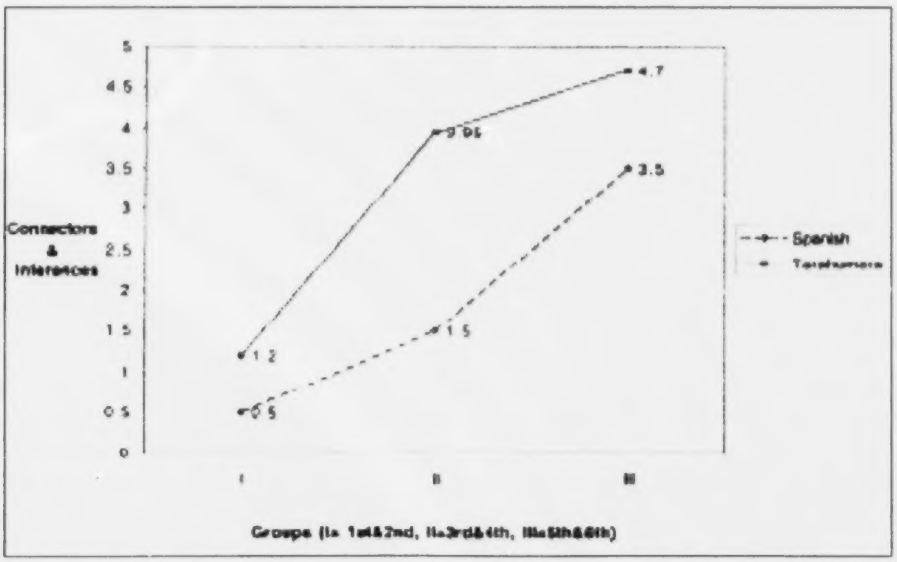
tional skills in the L2. This is consistent with the findings related to the typical development time of BICS, which in the second language takes approximately two to three years to manifest itself.

Academic Language Proficiency/CALP: When the oral narrations were analyzed for the number of connectors and inferences, a significant increase was found in both languages between the 1st/2nd and 5th/6th grades. Considering that conversational language did not show any correspondent variation across grades at least in one language, the variation in inferences and connectors must point at a distinct dimension of oral language development, which is discourse competence. The growth of oral narration abilities refers to the development of Cummins' academic language proficiency, which is acquired through school and school-like activities. Considering that academic language is acquired through literacy training, the new competence showed in the Spanish-Tarahumara oral narrations should predict later success with school-based academic skills.

In addition, the positive correlation between the measure of text complexity in both languages seems to be consistent with the principle of language interdependence, which proposes that both languages share the same cognitive knowledge to construct oral narrations. Considering the current submersion-like Spanish instruction provided to the children, the profile of Tarahumara language dominance for the majority of the children up to third grade, and the indication that the ability to produce narration in Spanish are the same or below Tarahumara (see Figure 5), we could speculate that spending time on instruction in Tarahumara would cause no delay in the development of Spanish, but on the contrary could further strengthen and develop the basis for its successful development.

Finally, the fact that the level of textual complexity in Tarahumara is equivalent to or above the level of Spanish could be viewed as consistent with Cummins'

Figure 5. Textual complexity



affirmation that "transfer is much more likely to occur from minority to majority language because the conditions of exposure and motivation are met, whereas this is usually not so in the opposite direction" (Cummins, 1988, p. 156-157). In this perspective, students' oral academic skills in Spanish, their weaker language, could be in a process of "catching up" with their oral native language skills. However, considering there is a slow closing of the gap between the ability to produce narration in Tarahumara and Spanish, it could be hypothesized that Spanish instruction is allowing for a steady growth of Spanish academic language, while the trend of Tarahumara discourse skills reflects the lack of "nourishment" by school instruction.

Conclusions

The preliminary results reported here provide evidence that even in a case of diglossic relationship between the native and the second language, where the native language is not employed for school instruction, the basic processes of oral bilingual proficiency development proposed by Cummins are applicable. The question to be answered at this point is whether there is indeed a correlation between literacy skills and oral proficiency demonstrated by the Tarahumara children. This answer will be the object of the next phase of the study.

The present research shows that the Entrevista Bilingüe can provide teachers of bilingual children and researchers of bilingual education with systematic information—to add to observational data—for estimating a student's language dominance and proficiency and to study the basic processes of oral bilingual proficiency development. All this information could be helpful for instructional choices. However, one has to keep in mind that the findings presented here also indicate that the production of bilingual vocabulary lists in a diglossic language contact situation might not be a reliable way to estimate students' language dominance and proficiency; on the other hand, such information is provided by conversation (question and answer) and free narration tasks. Finally, through a simple assessment such as the Entrevista Bilingüe, teachers could easily differentiate and assess levels of conversational abilities of their students vis-a-vis academic abilities related to the production of narration.

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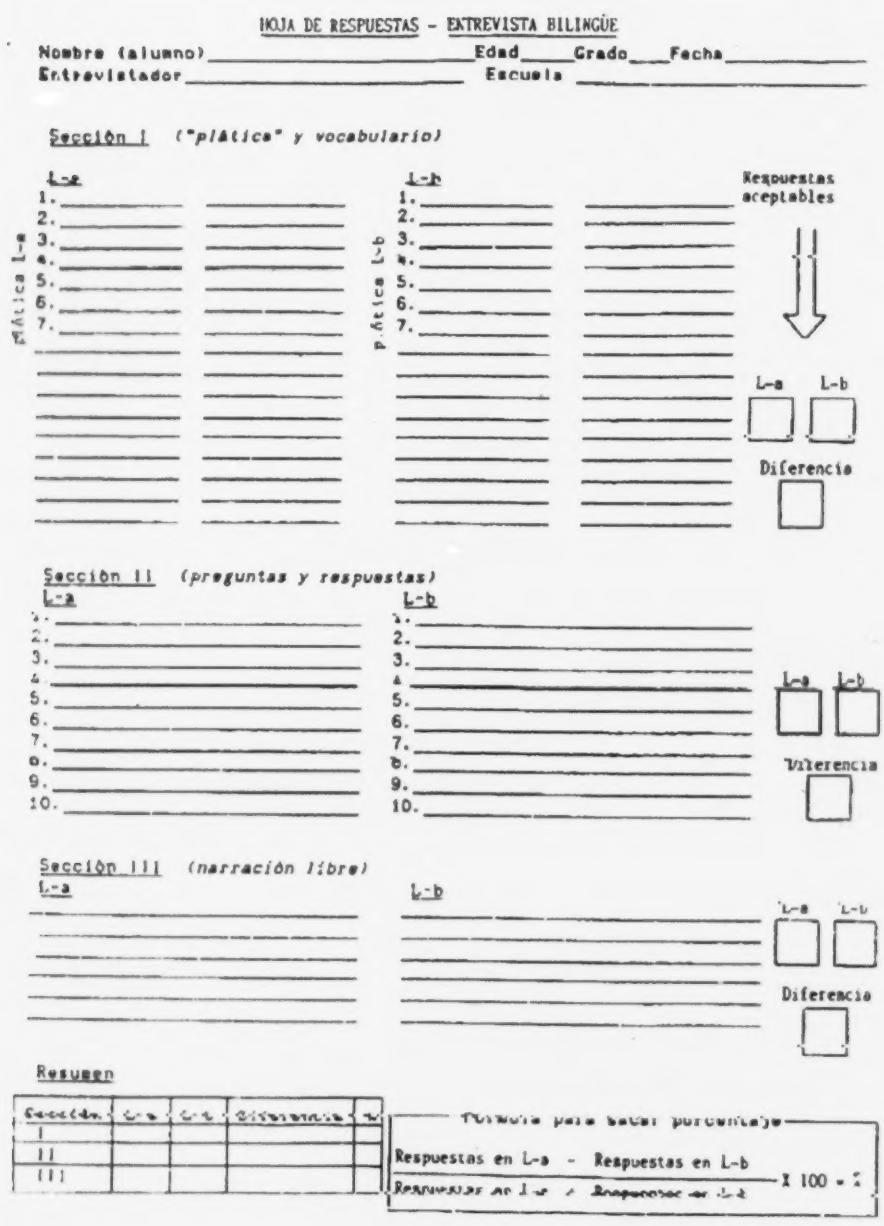
Appendix

Bilingual Interview



HOJA DE RESPUESTAS - ENTREVISTA BILINGÜE

Nombre (alumno) _____ Edad ____ Grado ___ Fecha _____

Entrevistador _____ Escuela _____

Sección I ("plática" y vocabulario)

L-a

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____

Plática L-a

L-b

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____

Plática L-b

Respuestas aceptables

L-a L-b

Diferencia

Sección II (preguntas y respuestas)

L-a

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

L-b

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

L-a L-b

Diferencia

Sección III (narración libre)

L-a

_____

L-b

_____

L-a L-b

Diferencia

Resumen

Sección	L-a	L-b	Diferencia	%
I				
II				
III				

Fórmula para sacar porcentaje

Respuestas en L-a - Respuestas en L-b / Respuestas en L-a X 100 = %

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